

REMARKS

Claims 1-48 are pending with claims 7-48 being withdrawn by the Examiner on the basis of a restriction requirement. Reconsideration of the rejected claims in view of the following remarks is respectfully requested.

35 U.S.C. § 102 Rejection

Claims 1-4 and 6 were rejected under 35 U.S.C. § 102(b) for being allegedly anticipated by U.S. Patent No. 6,358,813 to HOLMES et al. This rejection is respectfully traversed.

In order to establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must disclose each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). Applicant respectfully submits that a *prima facie* case of anticipation cannot be established because HOLMES fails to teach each and every element of the claims.

More particularly, independent claim 1 recites, *inter alia*,

selectively etching the insulator layer through the sub lithographic template mask to form sub lithographic features spanning to a sidewall of the at least one interconnect.

Applicant submits that HOLMES does not disclose or even suggest at least these features.

Applicant acknowledges that, e.g., Figs. 4 and 5 of HOLMES discloses a wiring structure which has a mask layer 8 and a conductive fill 7. However, the Examiner

should note that layer 9 in Figs. 4 and 5 is merely an etched pattern of layer 8. Furthermore, while it is apparent from Fig. 5 that the layer 8 has openings which allowing etching of material underneath, the material etched in HOLMES is the conductive fill 7 and not an underlying insulator layer 2a.

Applicant emphasizes that whereas the invention provides for selectively etching the insulator layer through the sub lithographic template mask to form sub lithographic features spanning to a sidewall of the at least one interconnect, HOLMES specifically discloses at col. 3, lines 11-13 that "the pattern only etches into the electrode material 7 and has no effect upon the surrounding silicon oxide layer 2a" (emphasis added).

Furthermore, while the Examiner maintains that Fig. 15 of HOLMES specifically shows selectively etching the insulator layer through the sub lithographic template mask to form sub lithographic features spanning to a sidewall of the at least one interconnect, the Examiner has failed to appreciate that the embodiment shown in Fig. 15, like the embodiment shown in Fig. 6, utilizes an SiNit layer 5 which is described on col. 2, lines 51-53 as a "polish stop layer 5" that "prevents subsequent operations from diminishing the thickness of the upper oxide layer 2a." Thus, the embodiment shown in Fig. 15, like the embodiment shown in Fig. 6, utilizes a pattern that "only etches into the electrode material 7 and has no effect upon the surrounding silicon oxide layer 2a" (emphasis added). See col. 3, lines 11-13.

Still further, to the extent that the Examiner is relying on a comparison between Figs. 14 and 15 of HOLMES which appear to show (on the right side of the electrode material) some removal of the stop layer 5 and upper oxide layer 2a, Applicant

emphasizes that HOLMES does not specifically indicate that the drawings are to scale and clearly does not show any removal the stop layer 5 and upper oxide layer 2a on the left side of the electrode material – which would be expected if HOLMES did in fact teach to form openings in the insulating layer 2a and not just in the electrode material.

In this regard, Applicant specifically directs the Examiner to MPEP 2125 which states:

When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. See *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (The disclosure gave no indication that the drawings were drawn to scale. "[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue."). However, the description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art. *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977) ("We disagree with the Solicitor's conclusion, reached by a comparison of the relative dimensions of appellant's and *Bauer's* drawing figures, that *Bauer* 'clearly points to the use of a chime length of roughly 1/2 to 1 inch for a whiskey barrel.' This ignores the fact that *Bauer* does not disclose that his drawings are to scale. ... However, we agree with the Solicitor that *Bauer's* teaching that whiskey losses are influenced by the distance the liquor needs to 'traverse the pores of the wood' (albeit in reference to the thickness of the barrelhead)" would have suggested the desirability of an increased chime length to one of ordinary skill in the art bent on further reducing whiskey losses." 569 F.2d at 1127, 193 USPQ at 335-36.)

At the very least, the Examiner must acknowledge that the specification of HOLMES is entirely silent with regard to etching any part of the silicon oxide layer 2a and only discloses etching into the electrode material 7 (see col. 3, lines 11-13).

Thus, Applicant respectfully submits that independent claim 1, and claims 2-4 and 6, which depend from claim 1 are allowable.

Accordingly, Applicant respectfully requests that the above-noted rejection under 35 U.S.C. § 102(b) should be withdrawn.

35 U.S.C. § 103 Rejections

Claim 5 was rejected under 35 U.S.C. § 103(a) for being allegedly unpatentable over HOLMES alone. This rejection is respectfully traversed.

The Examiner acknowledges that HOLMES fails to disclose, among other things, the features recited in the above-noted dependent claim. However, the Examiner explains that such features are acknowledged in Applicant's specification as being known and that it would have been obvious to combine the teachings of these documents. Applicant respectfully submits that a *prima facie* case of obviousness has not been established as the applied reference fail to teach each and every element of the claims.

As explained above, whereas the invention provides for selectively etching the insulator layer through the sub lithographic template mask to form sub lithographic features spanning to a sidewall of the at least one interconnect, HOLMES specifically discloses at col. 3, lines 11-13 that "the pattern only etches into the electrode material 7 and has no effect upon the surrounding silicon oxide layer 2a" (emphasis added). Furthermore, the Examiner has failed to explain why or how one could properly characterize the etching of a conductor via a mask layer as the selectively etching the insulator layer through the sub lithographic template mask to form sub lithographic features spanning to a sidewall of the at least one interconnect.

Accordingly, Applicant submits that no proper modification of HOLMES discloses or suggests the combination of features recited in at least claim 1.

Moreover, in addition to failing to disclose the combination of features recited in the above-noted claim 1, Applicant submits no proper modification of this document discloses or suggests the combination of features recited in dependent claim 4, which also respectfully contains all of the features of claim 1.

Accordingly, Applicant respectfully submits that the above-noted rejection under 35 U.S.C. § 103(a) should be withdrawn.

Request for Rejoinder of Non-Elected Claims

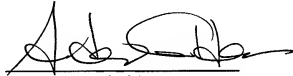
Applicant submits that rejoinder of withdrawn claims 7-48 is now proper. At the very least, claims 7-35 should be rejoined because these claims depend from claim 1 which is believed to be allowable. Applicant refers the Examiner to MPEP 821.04 which indicates that withdrawn claims which depend from or otherwise include all the limitations of the allowable claims will be rejoined if presented prior to allowance and issuance of a final rejection. Accordingly, Applicant requests that the Examiner rejoin all the withdrawn claims directed to the non-elected invention and consider the merits of the same.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that all of the claims are patentably distinct from the prior art of record and are in condition for

allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Any fees required for consideration of the instant response are hereby authorized to be charged to our Deposit Account No. 09-0458.

Respectfully submitted,
Daniel C. EDELSTEIN et al.

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', is written over a horizontal line.

Andrew M. Calderon
Reg. No. 38,093

March 19, 2007
GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
703-716-1191